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The Effect of Self-Concept on Math Achievement in Fourth Grade Students

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**THE EFFECT OF SELF-CONCEPT ON MATH ACHIEVEMENT
IN FOURTH GRADE STUDENTS**

THESIS

Submitted to the Graduate Committee of the
Department of Education and Human Development
State University College at Brockport
in Partial Fulfillment of the
Requirements for the degree of
Master of Science in Education

by

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ABSTRACT

The purpose of this study was to determine if there is a correlation between self-concept and math achievement on a standardized test for a heterogeneous group of forty-eight fourth grade students. Also studied were the relationships of self-concept and math achievement on students from single parent homes and students from two-parent households and the differences between male and female students in the areas of self-concept and math achievement.

Forty-eight fourth grade students from a suburban school district in Rochester, New York were the subjects of this study. Twelve of the forty-eight were from broken homes.

The math section of the Stanford Achievement Test was taken by each student. The raw score of overall math ability was used to determine math achievement. The day before the test the students completed the Coopersmith Self-Esteem Inventory.

The Pearson Product Moment Method was used to determine if there was statistically significant correlation between self-concept and math achievement. A t test was used to determine if there was a significant difference between the math scores of males and females and the math scores of students from one-parent homes and students from two-parent homes.

The results of this study indicated there was no significant relationship between math achievement and self-concept. There was also no significant difference found between self-concept for females and self-concept for males and math achievement for males versus females. The data also showed no significant difference between the self-concept of students from one-parent households and students from two-parent homes and no significant difference in math achievement for students from one-parent homes and students from two-parent homes.

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CHAPTER I
STATEMENT OF THE PROBLEM

Purpose

The purpose of this study was to determine if there is a significant correlation between low self-esteem and math achievement on a standardized test for a heterogeneous group of fourth grade students.

The questions to be answered were:

1. Is there a statistically significant correlation between low self esteem and mathematical achievement in fourth grade students?
2. Is there a significant difference between low self esteem in male students and low self esteem in female students.
3. Is there a significant difference between the math scores for female students and the math scores for male subjects?
4. Is there a significant difference between the self esteem scores of students from divorced parents and those from households with two parents.
5. Is there a significant difference between the math scores for students with divorced parents and students from households with two parents.

Statement of the Problem

There are some children that will try new things with enthusiasm and approach peers and adults alike with the utmost confidence, still, there are other children who seem to shy away from new and unfamiliar things and seem to think they are incapable in many areas. Young children's belief about whether they can or cannot do something, most certainly affects the way they approach both new and old situations.

For many years educators have studied and pondered the effect of one's self-concept on their actual performance in school. The concern can be justified. According to Harter, (cited in Marshall, 1989) low self-concept is related to poor mental health, poor academic achievement, and delinquency. The opposite also seems to hold true. Positive self-image correlates with good mental health, good academic achievement, and good behavior.

The Need for the Study

The need for this study is therefore obvious. There are many outside factors that influence children's success, but none more important than the way they view themselves. Noted Psychologist Dr. James Dobson points out that a child can make it through life not knowing the difference between a noun and a verb but his chances for success are poor if he has a low opinion of himself.

One of the functions and goals of the New York State School System is to develop a positive self-concept in its students. Unfortunately, teachers are not trained in developing or improving self-concepts, and have little time built into the curriculum for emotional development of the students. However, some school districts are starting to add effective programs to their curriculum.

According to research (Flynn, 1984), there is little doubt that the development of a positive self-concept is a prerequisite to academic achievement.

Research also indicates that children from homes with divorced parents tend to have a lower self-concept (Mills, 1984).

Almost all academic areas can be affected by a poor self-esteem, but math is the one area that seems to correlate most often with a positive self-concept. Research by Nielsen (1990) supports this idea. He states there is anecdotal evidence that self-confidence and self esteem accrue to students who achieve in mathematics and that this accounts for higher student achievement across the board. This result may well be rooted in the belief that math is difficult and that if students learn this most difficult subject, they begin to believe they can learn anything.

Finally, measuring self-concept has always been a difficult task. For this study we will use the Self-Esteem Inventories developed by Stanley Coopersmith, Ph.D. Along with this study I will talk to each students teacher to get their opinion of the child.

Definition of Terms

Self-Concept: The perceptions, feelings, and attitudes that a person has about himself or herself.

Self Concept Measuring Device: Self-Esteem Inventories developed by Stanley Coopersmith, Ph.D.

Math Test to Use: New York State Stanford Achievement Test

Summary

The purpose of this study was to determine the relationship between self-concept and math achievement of fourth grade students. It also explored the relationship of math achievement and self-concept in students from households with divorced parents, and whether there was a difference in the self-concept of males and females.

CHAPTER II

REVIEW OF THE LITERATURE

Purpose

The purpose of this study was to determine if there is a significant correlation between low self-esteem and math achievement scores on a standardized test for a heterogeneous group of fourth grade students.

Definition

For over a decade American Psychologists and educators alike, have studied the self and its development in early childhood and its relationship to academic performance.

As stated earlier, the self-concept is the perceptions, feelings, and attitudes that a person has about himself or herself. It is how someone sees themselves. There is also evidence that indicates that a person's self-concept can vary from area to area. For example, a person can have a low self-concept in academic areas, but at the same instance can have a positive self-concept in areas as an athlete.

In Piaget's terms, the self-concept is our attempt to explain ourselves to ourselves. It is not permanent, but actually ever-changing. According to (Bromely, 1978, p. 164), it is an intricate system of ideas and feelings that are not always coherent. Our self perceptions vary from situation to

situation and from one phase of our lives to another (Woolfolk, 1987, p. 105).

The development of the self-concept also changes with age and maturity, and is effected greatly by environment. It is widely accepted that self-concept develops as children interact with their environment. According to Woolfolk (1987), the child's self-concept is influenced by parents and other family members in the early years and by friends, schoolmates and teachers as the child moves through life.

It is clear that people are not born with a specific self-concept, instead it is learned. Evidence shows that self-esteem is learned almost entirely in infancy and childhood, but can be modified throughout one's life.

There are several external factors in the development of self-concept. Number one is the responsiveness of caregivers. Self-concept develops mainly within a social context. That context for infants is, of course, the family. The interpersonal environment that caregivers provide is the first environment for the infant and sets the tone for the development of a positive self-concept. The quality, consistency, and timing of adults' responses to infants may carry messages about trust, caring, and the value of the infant (Marshall 1989). When caregivers respond positively to infant cues, children quickly learn that they are of value and that they can influence their environment. This feeling of control helps develop positive self-esteem (Harter, 1983).

Another external factor that effects the development of self-concept is the physical environment. According to Marshall (1989), if developmentally appropriate materials are easily accessible to young

children for exploration in an encouraging environment, they are likely to acquire feelings of competence and confidence in approaching new materials. Developmentally appropriate materials are described as those that provide both challenge and success.

Parental attitudes and childrearing practices also greatly effects the development of self-concept. Sears (1970) found that parents who were warm and accepting with their children when they were young, had children with positive self-concepts at age 12. Parents who use an authoritative approach to childrearing are also more likely to have children with a high self-esteem. An authoritative approach is effective because parents place reasonable demands on their children, but at the same time they do not impose unreasonable restrictions and allow their children some choice and control (Maccoby & Martin, 1983).

Expectations is another external factor that helps or hinders self-concept.

Marshall (1989) states that teachers and parents can influence children's self-esteem both directly and indirectly. Adults directly influence children's self-concept by the opportunities that are provided to the children so they can learn and become competent. For example, if a parent or teacher believes that a certain child is more capable to learn, they will probably provide that child with more materials and challenges. Therefore, the adults expectations can expand the child's abilities, and directly effect the child's perceived competence.

Marshall (1989) points out that parents' and teachers' expectations can indirectly effect a child's self-esteem in more subtle ways. As children

grow older they become more aware of environmental cues. Young children are not great at knowing adults expectations for them. Usually, the children hold higher expectations for themselves than their teachers hold for them (Weinstein, Marshall, Sharp, & Botkin, 1987). However, kindergarten and primary teachers need to be cognizant of the subtle ways that their expectations can influence children's self-concept. If teachers make their evaluations of children obvious, such as pointing out the student's best work, children's self-evaluations can show some consistency with those of the teacher (Stipek & Daniels, 1988). In general, students who are young, dependent, conforming, or who really like the teacher are most likely to have their self-esteem affected by the teacher's views (Brophy, 1982).

Finally, classroom environments, such as structure and teacher's control orientation may influence children's self-concepts as well (Marshall & Weinstein, 1984). According to (Rosenholtz & Rosenholtz, 1981), this is exemplified in studies concerning the difference between the effects of "unidimensional" and "multidimensional" classrooms. Unidimensional classrooms are defined as those classrooms where teachers emphasize a narrow range of student's abilities, for example they value reading ability to the neglect of artistic ability. In multidimensional classrooms, however, teachers emphasize multiple abilities, like reading and creativity. In classrooms that have characteristics similar to a unidimensional environment, kindergartners perceptions of their ability were shown to be lower than those of kindergartners who learned in a more multidimensional classroom, although the two groups were learning

the same skills (Stipek & Daniels, 1988). Teachers need to be aware of where they put their emphasis.

Studies have also shown that teachers who tend to have complete control of a classroom, instead of supporting children's autonomy, can negatively effect student's self-concepts.

As children grow older peers become more important and can significantly effect one's self-image. Older children (grades three through eight) who have a high self-concept in the social domain have higher status with their peers (Kurdek & Krile, 1982). This has a reciprocal nature, that is, social self-concept may influence peer relationships, or being popular may enhance social self-concept.

Children from Broken Homes

As noted earlier, parents and the home environment play a crucial role in the development of children's self-concept. What then is the effect of divorce on the child's self-image?

With today's increasingly high divorce rates that is a very important question. According to most studies the age of the child at the time of the divorce is a major factor in how much it will effect the child. One study states that losing a parent by death or divorce before the age of seven may alter the child's self-concept (Levi, Fales, Stein & Sharp, 1966).

According to Woolfolk (1987), the first two years after the divorce seem to be the toughest for both boys and girls. During this period children may have difficulties with insomnia, and more. One key factor is that they may blame themselves for the breakup of their family or have

unrealistic hopes for getting the family back together (Pfeffer, 1981). Overall, long-term adjustments seem more difficult for boys. This may be due to the fact that Fathers are usually the ones that are no longer around, leaving the boys without a positive male role model.

Mills (1984) reports that there are significant differences in measured self-concept between children from broken homes and children from intact families. Divorce produces many changes for the children. Most importantly it probably means less time spent interacting with their parents because of the demands of a single-parent household. However, sometimes a divorce improves the environment in which the child is brought up.

Sex Differences and Self-Concept

Almost all recent studies have shown that girls have a more positive self-esteem than boys. For example, Simmons (1975) found in a study that the mean self-concept for girls was higher than that of boys at every single grade level.

Generally, boys are more non-conformist than girls and this may cause them to be in trouble more often and in turn may influence their self-concept in a negative way.

The Relationship Between Self-Concept and Achievement

There is little doubt that self-concept and academic achievement are related. Researchers agree that there is a positive correlation between

self-concept and academic performance (Coopersmith, 1987; Marshall, 1989; Purky, 1972; Flynn, 1984). Self-esteem is not separate from school performance in math, reading, social and physical skills. Instead it is an integral part of performance (Coopersmith, 1987). Countless studies conducted earlier (including; Bledsoe, 1964; and Bodwin, 1962) suggests that children with a high self-concept achieve greater success in school than children with lower levels of self-esteem. Indications are that children who feel positive about their abilities, and actually expect to do well, are better students. In fact, according to (Wattenberg and Clifford, 1974), a kindergartner's feelings about himself are a stronger indication of reading readiness than are more traditional methods, such as testing. Further study (Mills, 1984) also states that a child's readiness for school depends a great deal on his or her self-concept. Flynn (1984) further states that the development of a positive self-concept is a prerequisite to academic achievement.

The opposite is also true. The more negative the self-concept, the less likely the child will succeed or be ready for school. Many studies (Quimby, 1967;) support that students who are unsure of themselves or who expect to fail are more likely to give up on their school work. In addition a greater self-concept leads to a more positive attitude towards school and better behavior in the classroom.

Cognitive Factors of Self-Concept

External factors do play a major role in the development of self-concept, but so do internal factors such as cognitive development. The

level of children's cognitive development influences self-concept development (Marshall, 1989). Age and maturity certainly changes how a child views himself.

Preschoolers see themselves in both physical and action terms (Dannon & Hart, 1982). According to Harter & Pike (1984), young children see themselves as good or bad at something, period, without making the distinction between physical and academic competence such as older children do.

Research shows that self-concept is ever-changing and can be multifaceted. As students move into the primary and intermediate grades they start seeing themselves as good in one thing and poor in something else.

Primary aged children also start comparing their abilities to others and can classify hierarchically. For example, I'm a good kickball player, but Jimmy is the best in the class. Primary children are also more influenced by their perceptions of what significant adults think of them. Of course, as children move into the intermediate phase they are very concerned with how their peers view them. By the sixth grade the importance of peers is very evident.

As stated earlier, one's self-concept is always changing and cognitive abilities are a major reason. Feeling competent and developing social skills are building blocks for developing self-esteem.

Summary

In summary then, the literature supports what we already know, that self-concept greatly effects learning. Self-concept and school are not separate, students do not leave their self-esteems at the door every morning. Students who believe in their abilities are likely to try harder and achieve more in school. Students who believe they can't achieve are more likely to give up trying and fail. In the classroom, self-concept can determine the quality of the student's learning. The reverse is also true. Student experience in the classroom vitally affects the self-concepts

NRE National Re

classroom environment

1. self-concepts are developed as a child interacts with its external factors. Factors such as: physical environment; parental childrearing room environments, peers, and divorce. We believe that positive abilities play a role in the development

CHAPTER III

DESIGN OF THE STUDY

Purpose

The purpose of this study was to determine if there is a significant correlation between self-concept and math achievement on a standardized test for a heterogeneous group of fourth grade students. The questions to be answered were:

1. Is there a statistically significant correlation between self-concept and math achievement in fourth grade students?
2. Is there a significant difference between the self-concept scores for male students and the self-concept scores for female students?
3. Is there a significant difference between the math scores for male students and the math scores for female students?
4. Is there a significant difference between the self-concept scores of students from single parent homes and the self-concept of students from two-parent households?
5. Is there a significant difference between the math scores of students from single parent homes and the math scores of students from two-parent households?

Methodology

Subjects

Forty-seven fourth grade students from a suburban school district in Western New York served as subjects for the study. Of the forty-seven students twelve were from homes whose parents were divorced or separated.

Instruments

1. New York State Stanford Achievement Test for fourth grade students. The math aptitude scores were used to determine the students abilities in the area of math.
2. Stanley Coopersmith's Coopersmith Inventory (SEI or Self Esteem Inventory) was used to measure the subjects self-concept.

Procedure

A week before the students were to take their SAT's, they were given the Coopersmith Self Esteem Inventory. The subjects were told to answer the questions honestly and that their answers would not be public information.

Data Analysis

The results of the Self-Esteem Inventory were used to determine which students had a high self-concept and which students had a low self-concept. The student's teachers were also interviewed for further support.

The Pearson Product Moment Correlation was used to determine if there was a relationship between the self concept scores and the math achievement scores.

A *t* test was used to indicate if there was a significant difference between the mean performance of boys and girls and the mean performance of students from single-parent homes as compared to students from two-parent households.

Summary

The Coopersmith Inventory was administered to forty-seven fourth graders to determine if they had a low or high self-concept. The New York State standardized test for math at the fourth grade level was used to determine the math aptitude or abilities of the subjects. The Pearson Product Moment Correlation method was used to determine the exact relationship between the self-concept scores and the math achievement scores. A *t* test was used to indicate if there was a significant difference between the mean self-concept scores and math achievement for males and females, and students from broken homes or whole families.

CHAPTER IV

FININGS AND INTERPRETATION OF DATA

Purpose

The purpose of this study was to determine if there was a correlation between self-concept and math achievement on a standardized test for a heterogeneous group of fourth grade students.

The questions to be answered were:

1. Is there a statistically significant correlation between self-concept and math achievement in fourth grade students?
2. Is there a significant difference between the self-concept scores for male students and the self-concept scores for female students.?
3. Is there a significant difference between the self-concept scores of students from single-parent homes and students from two-parent households?
4. Is there a significant difference between the math achievement scores for male students and the math achievement scores for female students?
5. Is there a significant difference between the math achievement scores for students from single-parent homes and students from two-parent households?

Analysis of Data

The mean, median, standard deviation and skewness are presented in Table 1 for the variables Self-Concept and Math Achievement scores.

Table 1
Self-Concept and Math Achievement Scores
for Fourth Grade Students

	Mean	Median	S.D.	Skewness
Self-Concept	68.292	68.000	16.869	.052
Math Ach.	34.416	35.000	6.066	-.288

Null Hypothesis 1

There is no significant relationship between Math Achievement scores and Self-Concept scores for the entire group of forty-eight fourth grade students. The Pearson Product Moment was used to determine r . The data presented in Figure 1 (Graph) and Table 2 indicate there was no statistically significant relationship between math achievement and self-concept. The data failed to reject Null Hypothesis 1.

Figure 1

**Relationship Between Reading Comprehension Scores
and Anxiety Scores (Data Shows No Correlation)**

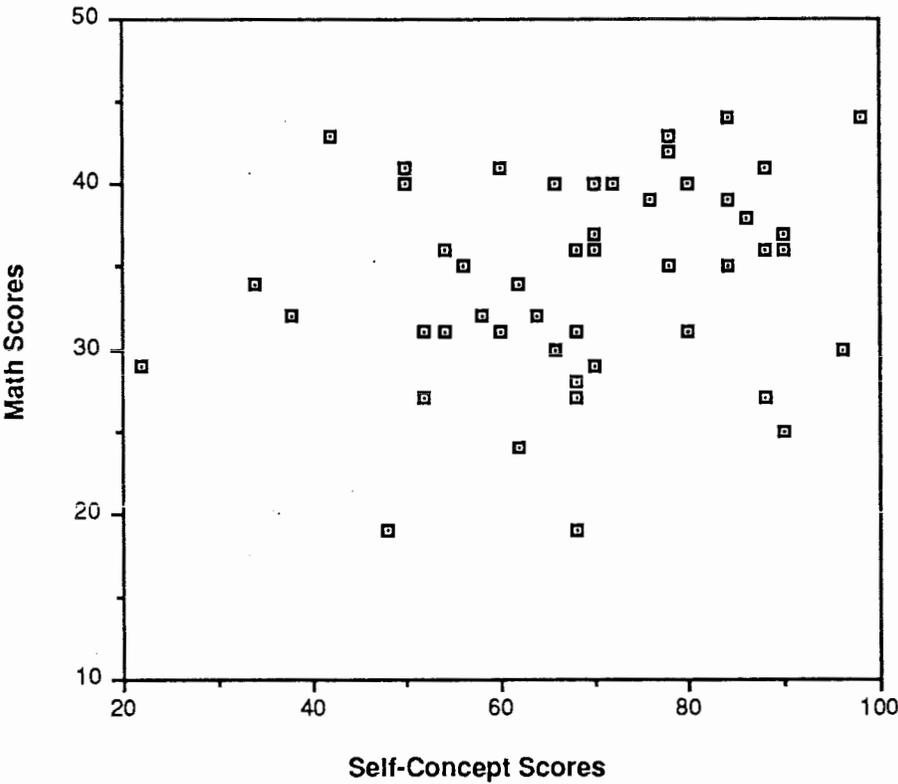


Table 2**The Relationship Between Math Achievement Scores
and Self-Concept Scores**

Scores	Mean	S.D.	r
Math Achievement	34.42	6.066	.055
Self-Concept	68.29	16.869	

Null Hypothesis 2

There is no significant difference between the self-concept scores for male students and the self-concept scores for female students. A t-test was used to determine that there was no significant difference. Therefore the data failed to reject the second Null Hypothesis. (See Table 3.)

Table 3

**Analysis of data for Self-Concept scores for Males
and Self-Concept Scores for Females**

Group	N	Mean	SD	SE
Males	25	65.52	16.973	3.394
Females	23	71.30	15.843	3.303
Difference in t-test	Mean	SE	t	df
Self-Concept Score	-5.78	4.74	1.22	46

Null Hypothesis 3

There is no significant difference between the self-concept scores of students from single-parent homes and students from two-parent households. A t-test determined there was no significant difference. Therefore the data failed to reject the third Null Hypothesis. (See Table 4.)

Table 4

Analysis of Self-Concept of Students from One-Parent Households and Students from Two-Parent Homes

Variable	Status	N	Mean	SD	SE
Self-Concept	One Parent	12	62.000	21.23	6.135
	Two Parents	36	70.388	14.97	2.495
Difference in t-test					
	Mean	SE	t	df	
Self-Concept Score	-8.388	6.616	1.267	46	

Null Hypothesis 4

There is no significant difference between the Math Achievement scores of male students and the Math Achievement scores of female students. A t-test determined there was no significant difference.

Therefore the data failed to reject the fourth Null Hypothesis. (See Table 5.)

Table 5
**Analysis of Math Achievement Scores of
 Male Students and Female Students**

Variable	Group	N	Mean	SD	SE
Math Achievement	Male	25	33.52	6.45	1.29
	Females	23	35.39	5.31	1.11
Difference in t-test					
	Mean	SE	t	df	
Math Achievement	-1.87	1.70	1.12	46	

Null Hypothesis 5

There is no significant difference between the Math Achievement Scores of students from single-parent homes and students from two-parent households. A t-test determined there was no significant difference. Therefore also failed to reject the fifth Null Hypothesis. (See Table 6.)

Table 6**Analysis of Math Achievement Scores of Students from One-Parent Homes and Students from Two-Parent Homes**

Variable	Status	N	Mean	SD	SE
Math Achievement	One Parent	12	31.92	6.10	1.76
	Two Parents	36	35.25	5.92	.99
Difference in t-test					
	Mean	SE	t	df	
Math Achievement	-3.334	2.02	1.65	46	

Summary

The subjects for this study were a group of forty-eight heterogeneously grouped students. Each student filled out the Coopersmith Self-Esteem Inventory to determine self-concept; The students' teachers were also interviewed for further information regarding self-concept. The student's math abilities were determine by the math portion of the Stanford Achievement for fourth grade students.

The Pearson Product Moment was used to determine if there was a correlation between math achievement and self-concept. According to the data compiled there is no significant relationship. A t-test was used to determine if there was a significant difference for null hypotheses two, three, four and five. The data failed to reject all of the hypotheses (2,3,4,5).

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

Purpose

The purpose of this study was to determine if there is a statistically significant correlation between self-concept and math achievement on a standardized test for a heterogeneous group of forty-eight fourth grade students. Other areas this study looked at were the differences between the self-concept of male and female students; the difference in math achievement between male and female students; and the difference in self-concept and math achievement between students from single-parent homes and two-parent households.

Conclusions

The results of this study indicated there was no significant correlation between self-concept and math achievement.

The lack of a correlation between self-concept and math achievement found in this study goes against current research in the area of self-concept. (S stated earlier in the review of literature most educators and researchers believe the self-concept is directly related to school academic performance. According to Coopersmith (1987), there is a positive correlation between self-concept and academic performance. He states

that self-concept is not separate from school performance, but actually an integral part of academic achievement. Flynn (1984) sees a positive self-concept as a natural prerequisite to good academic performance. Self-confidence has been the key variable in learning mathematics over the past decade (Kloosterman, 1988).

No significant difference was found in the self-concept of males and the self-concept of females. This also contradicts most current research. Simmons (1975) found in his study that the mean self-concept for the girls was higher at every grade level than the boys. However, most researchers testing the Coopersmith Self-Esteem Inventory detected little difference between means of males and females. Cowan, Altmann, and Psyh (1978), found that females who have a high self-concept appeared to have more school success than boys who showed high self-esteem.

Recent studies on the effects of divorce somewhat contradict this study's findings concerning self-concept and divorce. One interesting conclusion of recent research is that the age of the child at the time of the divorce is a significant factor on how much it will affect the child's self-image. Levi, Fales, Stein & Sharp (1966) discovered that if divorce occurs before the age of seven it may affect the child's self-concept. Mills (1984) found significant differences in the self-concepts between children from broken homes and intact families. With the recent surge of divorce in America more studies need to be conducted to see what effect it is having on children.

The data in this thesis also showed no significant differences in the math achievement between students from one-parent homes and children

from two-parent households. There has been little research in this area specifically, but Mills (1984) found that students from broken homes were somewhat less successful in school. One parent has little time to help their children with their schoolwork and this may hinder the children's progress.

There is a belief that males are better than females in math related fields, but recent research does not support this belief. Nielsen (1990) points out that females have been very successful in new math programs that have developed throughout the United States. Kloosterman (1988) found that females expect to make mistakes while using mathematics (more than males) and that this helps them to work through the steps of a difficult math problem. This study found no significant difference in math achievement for males and females. Most researchers would agree and support this data.

Observations and Additional Findings

Although there was no significant relationship in the number of students who were rated as having a low self-concept the numbers were interesting. Of the 48 subjects, twelve students were categorized as having a poor self-esteem, including seven boys and five girls.

There were three students that were signaled out by their teachers as candidates for low self-concept that actually scored as high self-esteem on the inventory.

Implications for Classroom Practice

Even though this study shows no correlation between math achievement and self-concept it is obviously still important for children to feel good about themselves. It should be the aim of education to enhance a child's self-concept as he goes through school. Ideally, schools will integrate self-concept programs into all classrooms, the goal being to raise self-esteem in some students, to maintain positive self-esteem in others (Coopersmith, 1987). There are several techniques teachers can use in the classroom to improve self-concept in their students. The following are some examples.

One progressive idea is the responsive classroom environment. This is a classroom environment that is designed to respond to the learners. This is set-up by giving the learners free exploration among several activities so the children can make their own discoveries of cause and effect. According to Nimnicht, MacAfee, and Meier (1969), the responsive environment helps children perceive that what they want is important.

Students' beliefs and expectations are also important factors in self-concept. Students tend to believe what their parents and teachers expect from them. There is substantial evidence that teachers who have high expectations of their students produce marked increases in student performance (Good, 1970). Expectations evoke behaviors by setting up possibilities that before may have seemed impossible.

Teachers can help children feel they are of value by listening attentively and respecting their ideas.

One very important step is to provide the students with some successful experiences. This will encourage them to try the next step. Teachers must be careful to allow children to complete tasks by themselves (Marshall, 1987).

Another way to improve self-concept is to allow the children to feel they have some control. Providing opportunities for choice and autonomy will give them that sense. Teachers should try to avoid comparisons between students, instead they should teach children to evaluate themselves.

Something as simple as teaching children interpersonal skills will improve self-esteem. Knowledge of how to interact appropriately with peers is likely to enhance peer acceptance and liking (Marshall, 1987). This, of course will improve their social self-concept.

Along the same lines, we as teachers can help students develop constructive ways of dealing with difficulty. Getting the child's parents involved in the student's growth will also help. Some recent studies have shown that parent training can often help parents learn how to help children deal with problems in their life (Coopersmith, 1987).

Finally, teachers must be a model of someone with a positive self-concept. Teachers who express confidence in their abilities and are able to *cope with the issues of their own lives may bolster a child's view of the world* (Coopersmith, 1987).

Implications for Further Research

The contradictions found between previous literature and this study certainly warrants further research. Since only one self-esteem inventory was used it might be beneficial to use a different scale or a combination of several. Math achievement was the only academic area that was checked for correlation with self-concept; it would be interesting to investigate the relationship between self-concept and reading comprehension or overall achievement. It may change the outcome.

Of the forty-eight students that were tested, twelve (25%) scored as having low self-concepts. Enhancing self-concept should be on the future agenda of all educators.

The divorce rate in this country continues to hover around fifty percent. Further research needs to be done to study the effect of divorce on both the self-concept and academic achievement of students.

Summary

The results of this study contradict somewhat from previous research done on the subject of self-concept. This thesis indicated that math achievement can not be predicted by a student's self-concept. That is, there is no significant correlation between self-esteem and math achievement. This study's data also indicated no significant difference between the self-concept of males and the self-concept of females; no significant difference between math achievement of males and females; no

significant difference between the self-concept of students from one-parent households and two-parent homes; and no significant difference between the math achievement of students from single-parent homes and two parent households.

Further research is needed in the areas of both self-concept and divorce.

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